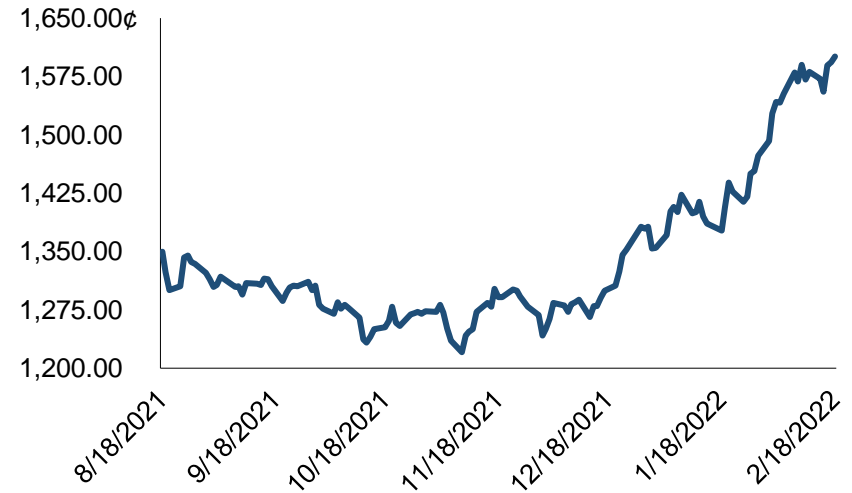


## S N2 | Six-Month Price Chart



### Position Details

- Soybean | S N2
- Underlying Price: 1,636.00¢
- Bull Call Spread
- Expiration Date: June 24, 2022

### Agriculture Sector

#### Analyst

Gavin Carey  
Gavin.Carey22@gmail.com

#### President

Luke Palma  
lukepalma25@gmail.com

#### Vice President

Nico Mahramas  
nicomahramas@gmail.com

#### Chief Investment Officer

Joseph Palermo  
joseph.palermo12@gmail.com

## Table of Contents

- I. Product & Position Overview
- II. Macroeconomic Thesis
- III. Risk Analysis
- IV. Technical Bias & Fair Value
- V. Capital Allocation



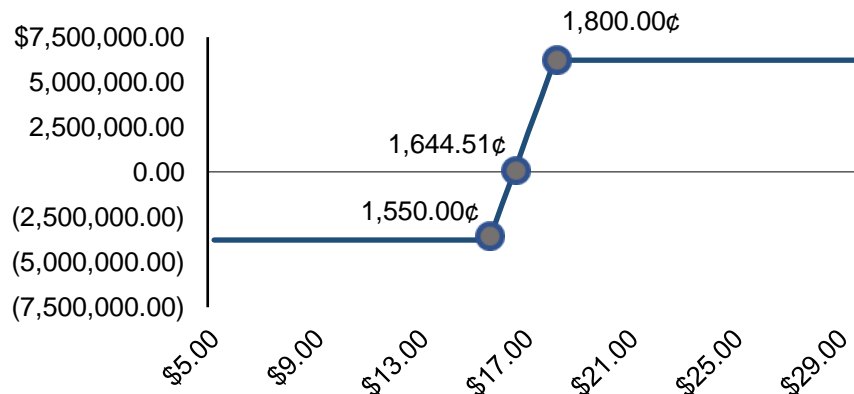
## I. Product & Position Overview

## Product & Position Overview

### Product Description

- Soybeans are a legume grown in tropical to moderate climates and are one of the most exported agricultural products
  - Standard soybean contracts represent 5.00 k bushels of soybeans which accounts for approximately 136.00 mm MT
- Major Countries Involved**
  - Imports**
    - China | 60.47%
    - Argentina | 3.03%
    - Netherlands | 2.67%
  - Exports**
    - Brazil | 44.30%
    - U.S. | 40.10%
    - Argentina | 3.60%
- Uses**
  - ~77.00% of soybeans are used in livestock feed
  - ~20.00% are used for biodiesel and bioheat

### Payoff Diagram



### Trade Breakdown

- Bull Call Spread**
  - The strategy benefits from bullish price movement
- Setup**
  - We Buy – 800.00 ITM 1,550.00¢ Calls | S N2
  - We Sell – 800.00 OTM 1,800.00¢ Calls | S N2
- Expiration**
  - Date: July 14, 2022

### Exit Strategy & Potential Hedge Strategy

- Bull Base & Bear Case**
  - 1,881.40¢ / 1,799.60¢ / 1,425.72¢
  - Breakeven – 1,644.51¢
- Methodology**
  - The target price would represent a 15.00% increase in the underlying which is the bull case
- Hedge Strategy**
  - In the event of bearish price movement, the Sector plans to sell soybean futures in Sector briefings



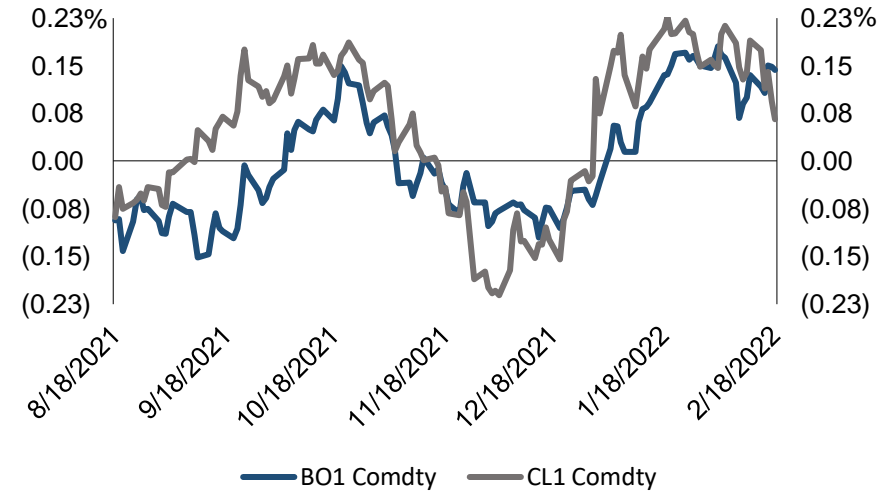
## II. Macroeconomic Thesis

## Macroeconomic Thesis

### Macroeconomic Summary

- **Increased Reliance On U.S. Soybean Supply**
  - Reduced harvest yields in South America are resulting in a reduction of soybean reserve estimates by 17.00%
    - La Niña weather patterns are the cause of inadequate harvests and are expected to continue
  - Demand for U.S. soybean exports increased to a 17-month high to aid the global soybean supply shortage
- **Cleaner Energy Demand**
  - Soybean oil byproduct offers a substitute to oil in the form of biodiesel amidst the current energy shortage
    - Soybean oil accounts for 63.00% of feedstocks used in the production of biodiesel
  - Pertamina plans to invest \$15.00 bn to lower emissions over the next six years via biofuel production
    - Demand for cleaner energy from shareholders has put pressure on major energy firms to comply
- **Short-Term Impact On Food Inflation**
  - Fed uses Core PCE to gauge their outlook on inflation and manage their strategy for sequential rate hikes
    - Core PCE does not include food or energy consumption as part of inflation analysis
  - The impact of Fed interest rate hikes on food inflation will not be reflected in the current market prices for an additional one to two years

### Soybean Oil & WTI Crude m/m Percent Change | Six-Month Chart



### Market Pros & Cons

- Soybean cyst nematode outbreak across Midwest
- Bayer AG reduction of soybean herbicide
- Reduced tensions between Russia and the U.S.
- High soybean prices deterring demand

## III. Risk Analysis

## Risk Analysis

### Directional & Magnitude Risk

---

- **Delta Analysis**
  - The trade has a Delta value of 0.3952
  - The trade benefits from bullish movement of the underlying as it approaches max profit
- **Gamma Analysis**
  - The trade has a Gamma of 0.0002
  - Gamma has a minimal effect on the trade due to offsetting nature of the long and short calls

### Implied Volatility Risk

---

- **Vega Analysis**
  - The trade a Vega value of 0.0021
  - The position benefits from minimal volatility as the underlying asset is currently nearing breakeven

### Time Risk

---

- **Theta Analysis**
  - The trade has a Theta value of (0.0001)
  - The Theta is negative because the trade is currently out of the money and will decrease in value over time
  - Theta is so small because the trade is nearing its breakeven point where Theta would become positive thereafter

### Interest Rate Risk

---

- **Rho Analysis**
  - The trade has a Rho of (0.0033)
  - As interest rates increase our position will decrease in value due to the premiums of both calls decreasing in value

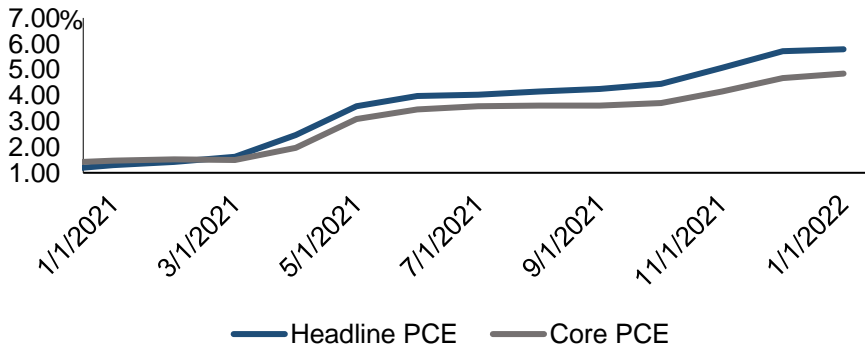




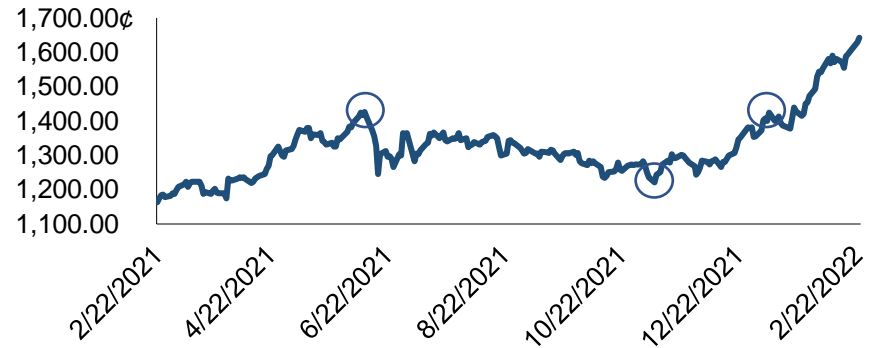
## IV. Technical Bias & Fair Value

## Technical Bias & Fair Value

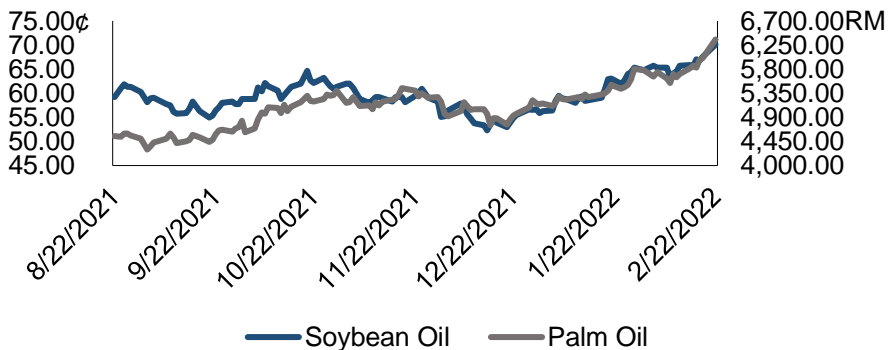
Headline PCE vs. Core PCE | One-Year Chart



S N2 Major Events | One-Year Chart



Soybean Oil vs. Palm Oil | Six-Month Chart



### Synopsis

- The Fed neglected to attribute an average of 0.51% YTD inflationary pressure to food and energy consumption not calculated in Core PCE
  - Food inflation is a consistent issue contributing to the rapidly increasing consumer prices across agricultural products
- A 30.21% gain in soybean price from the last day of November started the soybean bull market
  - Soybean gains can be attributed to less than expected supply harvest in Brazil due to La Niña weather patterns
- Vegetable oil demand in India has relied heavily on soybean oil as the cheaper option amidst record prices in palm oil

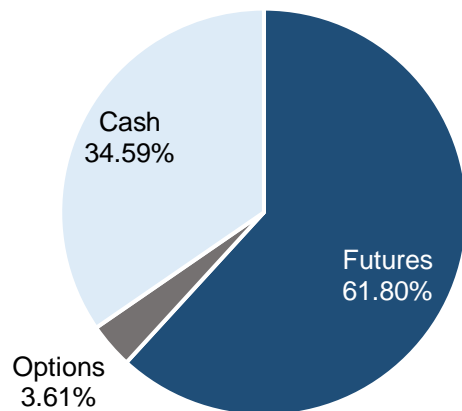


## V. Capital Allocation

## Capital Allocation

### Allocation Breakdown & Portfolio Implications

- The Sector is allocating \$3.78 mm of its total capital to the trade
  - This is the first options play the Sector is implementing into the portfolio and equates to 3.61% of its capital
- This trade will give our Sector a heavier weighting on soybeans when compared to the benchmark increasing exposure
  - The Sector was previously underweight on soybeans
- If the trade experiences adverse price movement the Sector intends to sell soybean futures



### Portfolio vs. Benchmark Allocation Weights

